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TC 1700

Docket No. P/73-2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



Applicant: Nowak et al.

Examiner: M. Jackson

Serial No.: 09/178,329

Group Art Unit: 1773

Filed: August 23, 1998

For: COMPOSITE WRAP MATERIAL

Assistant Commissioner for Patents
Washington D.C. 20231

*4/10/03
JMB*

THIRD DECLARATION OF THOMAS BEZIGIAN

I, Thomas Bezigan declare as follows:

1. I have reviewed the present invention, US patent application serial no. 09/178,329. I have also reviewed the cited prior art: US Patent 3,480,464, 3,010,860, 4,242,418, 5,250,348, 4,584,234, 2,582,037.
2. Lacy relates to a metallic laminate wrapping or packaging material for food stuffs and other commercial products like liquid shampoo, hair cream dye solvent, sour cream and liquid chlorine bleach. This product replaces heavier aluminum foil wraps that are stiff and bulky in appearance and more costly due to a heavier amount of aluminum. The object of Lacy is to create a lighter weight, flexible, metallic laminate structure having good appearance and moisture/vapor barrier akin to aluminum foil.
3. The product of Lacy comprehends any weight and type of base paper, but the lighter basis weight is preferred. The laminated product involves coating the base paper with a liquid polymer then cooling and solidifying it with a chill roll. The polymer layer makes the surface smooth for depositing a lustrous metal layer or coating polymer layer in a vacuum metallizer. Molten polymer is then extruded over the metal layer in the same way as the first polymer layer. The structure is thin (1-2 mls) and relatively easy to heat seal. The polyolefin/polymer layers are applied in a molten state as high temperatures (550-600 degrees).

4. The claims of the present invention do not require a metallized layer; have a solid film layer laminated to the paper layer and have heavier paper basis weights. Lacy requires a metallized layer; the polymer layer is applied in the molten state and the wrap is designed for wrapping liquid or food stuffs. Lacy requires a paper coated with polyolefin/vapor deposited metal/polyolefin. Adhesion promoting agents are placed between the layers. Further Lacy adds the polyolefin layer in a molten state which then must be cooled and solidified.
5. Eberl relates to a film laminate that can be made with or without a supporting base paper. The final product is used for wrapping food and has good moisture and vapor barrier properties. Eberl requires wax paper adapting a covering film of synthetic resin to at least one side. This is accomplished by feeding together the wax paper at room temperature and the sheet of film at a temperature that is higher than both the softening point of the resin and the melting point of the wax. The wax and softened plastic commingle and cohere, thereby creating a moisture/vapor barrier.
6. Eberl provides a composite protective material wherein a discrete film of thermoplastic resinous polymer which is compatible with hydrocarbon wax and also a film of hydrocarbon wax are united in such a manner as to create at their interface an intermediate layer of commingled polymer and wax imparting superior physical properties to the composite product. The finished product has the synthetic film adhered to the wax film through the medium of commingling of materials at the interface between the films.
7. In an embodiment of Eberl, film is extruded in a heated form and then covered by a layer of hydrocarbon wax. The heating effects a blending of the resin and wax at their interface. The blending of the wax and poly forms the adhesion between the film and the paper board.
8. A further embodiment of Eberl comprises a composite of resin and wax films free of a supporting paper base. The film is covered with a film of paraffin wax and heated to a temperature sufficient to accomplish the blending of the material at their interface, while the major portion of the film integrity is retained.

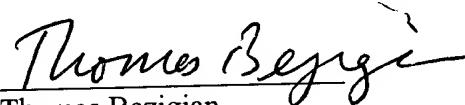
9. The claims of the present invention require a composite of paper and solid film; does not require the heating and blending of layers for adhesion, rather an adhesive is used to laminate the separate layers of paper and film; does not use a wax coating, and is not used for food wrap.
10. Eberl does not require the paper layer; requires the heating or blending of layers for adhesion; requires a wax coating; and is used for food wrap.
11. Kitagawa relates to a polyolefin laminate product that is used for photographic papers and comprises: a base paper of basis weight 100-180 g/m² that is coated or impregnated during the paper making process with a copolymer primer and then can be optionally subjected to corona discharge treatment. The coated base paper is then subjected to an extrusion coating of a polyolefin layer. The object of Kitagawa is to enhance the adhesion between the paper and polyolefin layers by treating the paper prior to extrusion coating and replaces the so-called dry lamination process of uniting paper and a polyolefin film with an adhesive.
12. Kitagawa relates to a polyolefin-paper laminate comprising (a) a base paper, (b) a copolymer of (1) at least one diene monomer and (2) at least one monovinyl substituted aromatic compound incorporated into or coated on the base paper and (c) an extrusion coated polyolefin layer thereon.
13. Kitagawa relates to light sensitive photographic papers; the plastic film layer is extruded in molten form; primers are required on the surface of the paper; and the photographic papers contemplated do not incorporate a paper/solid film lamination. Kitagawa requires polyolefin paper laminate having base paper, copolymer of at least one diene monomer and at least one monovinyl substituted aromatic compound incorporated into or coated on the base paper and an extrusion coating polyolefin layer thereon. The present invention has the plastic film layer processed in the solid state and incorporates a paper/solid film lamination.
14. Knauf relates to a bifacial wrapper for pressure sensitive products, i.e., ream wrap for carbonless printing papers. One side of a base paper is either printed or non-printed and extrusion coated with LD polyethylene; the other side of the paper is coated with PEI coating or primer. The primer coat enhances low pressure/heat

sealing of the ream wrap at the points where the opposite sides of the paper interface. The PEI layer can be done either before or after the poly extruded layer. In an embodiment, the base paper has a thin layer of polyethylene disposed on at least the side margins of the opposite side of the paper. These marginal areas of the wrapper are subjected to temperatures of 520-590 degrees, and the weight of the wrapped product is sufficient to effect a seal.

15. The claims of the present invention relate to a laminated product whereby a sheet of solid plastic film and a base paper are adhered using an adhesive. Knauf teaches that the plastic resin is extruded in molten form. Knauf further teaches that the paper has on one of its flat surfaces a layer of polyethylene and on the opposite side of its flat surfaces a layer of primer selected from polyalkyleneimine class.
16. Hirose relates to wrapping materials for photographic materials, especially light-shielding papers for wrapping photographic roll films used as backing papers. The product comprises a base paper laminated to a blended resin layer on at least one side of the paper by extrusion-lamination method. A light-shielding substance in powder, film, or foil form is added to any of the laminated layers. For instance, metallic foil may be laminated on the paper using adhesive. Several embodiments are comprehended: (1) a paper with a blended poly layer (added with an adhesive) on each side and a light-shielding substance added to one of the poly layers; (2) a paper layer with blended poly on either side or both sides, the light-shielding layer applied without adhesive; and (3) a laminated structure having a two-layer paper support.
17. Hirose relates to wrapping materials for photographic materials comprising laminated layers of a paper support and at least one thermoplastic resin layer superposed on at least one surface of said paper support; said thermoplastic resin layer comprises a blended resin of (a) a high-density polyethylene having a density of 0.950 g/cm³ or more and a melt index of 10-40 and (b) a low-density polyethylene having a density of 0.930 g/cm³ or less and a melt index of 1-40, the weight ratio of (b)/(a) being 70/30-5/95, preferably 70/30-20/80, more preferably 60/40-40/60.

18. The claims of the present invention require that the product is used for wrapping reams of paper; requires that a solid plastic film layer is laminated to the paper using an adhesive and requires a basis weight of 20-60 lbs. Hirose requires that the product is used for photographic films; requires light shielding elements; involves extrusion lamination of the poly layer and does not teach the basis weights claimed in the present invention.
19. Hyde relates to a flexible wrapping paper for food and consumer products that can be coated on traditional wax applying apparatus. A blend of microcrystalline wax modified by solid polyethylene is applied to a base paper.
20. Hyde does not teach the basis weight of the paper and does not make it obvious. Hyde uses a hot/melt waxing and not the lamination of a solid film to the base paper.
21. I hereby declare that all statements made herein of my own knowledge are true, and that all statements are made on information and belief believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the patent application to which it relates or any patent issued thereon.

Dated March 26, 2003


Thomas Bezigian